

6/12 DWPX - (C) The Thomson Corp.- image

AN - 2004-240866 [23]

TI - Reduction of defects, preferably number of pattern collapse defects, during manufacture of semiconductor devices by contacting substrate with process solution comprising specific amount of surfactant

IN - BARBER LC; CURZI DMK; DANIELLE MK; KARWACKI EJ; KING DM; WARWACKI EJ; ZHANG P

PN - EP1389746 A2 20040218 DW2004-23 Eng 25p *
AP: 2003EP-0017570 20030807

- JP2004078217 A 20040311 DW2004-23 Jpn 52p
AP: 2003JP-0292481 20030812

- US20040029395 A1 20040212 DW2004-23 Eng
AP: 2002US-0218087 20020812

- US20040029396 A1 20040212 DW2004-23 Eng
AP: 2003US-0339709 20030109, CIP of 2002US-0218087 20020812

- US20040053800 A1 20040318 DW2004-23 Eng
AP: 2003US-0616662 20030710, CIP of 2002US-0218087 20020812, CIP of 2003US-0339709 20030109

- KR2004030253 A 20040409 DW2004-53 G03F-007/32 Kor
AP: 2003KR-0055727 20030812

- TW200408700 A 20040601 DW2005-71 C11D-001/722 Chi
AP: 2003TW-0121575 20030806

- JP2006201809 A 20060803 DW2006-51 Jpn 39p
AP: 2006JP-0103543 20060404, Div Ex 2003JP-0292481 20030812

- **US7129199** B2 20061031 DW2006-72 Eng
AP: 2003US-0616662 20030710, CIP of 2002US-0218087 20021212, CIP of 2003US-0339709 20030109

- US20070010409 A1 20070111 DW2007-06 Eng
FD: Cont of US7129199 B
AP: 2006US-0520971 20060914, CIP of 2002US-0218087 20020812, CIP of 2003US-0339709 20030109, Cont of 2003US-0616662 20030710

- US20070010412 A1 20070111 DW2007-06 Eng
FD: Cont of US7129199 B
AP: 2006US-0520983 20060914, CIP of 2002US-0218087 20020812, CIP of 2003US-0339709 20030109, Cont of 2003US-0616662 20030710

- **TW-247799** B1 20060121 DW2007-13 C11D-001/722 Chi
AP: 2003TW-0121575 20030806

PR - 2003US-0616662 20030710; 2002US-0218087 20020812; 2003US-0339709 20030109; 2002US-0218087 20021212; 2006US-0520971 20060914; 2006US-0520983 20060914

DS - EP1389746
Regional States: AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LT LU LV MC MK NL PT RO SE SI SK TR

AB - EP1389746 A

NOVELTY: Defects during the manufacture of semiconductor devices are reduced by contacting a substrate, with a process solution comprising surfactant (10-10000 ppm).

- DESCRIPTION: Reduction of defects during the manufacture of semiconductor devices comprises providing a substrate; and contacting the substrate with a process solution comprising surfactant (10-10000 ppm) of formulae (I) or (II). R1, R4 = 3-10C alkyl chain; R2, R3 = H

- or 1-5C alkyl chain;and m, n, p, q = 0-20.
- **USE:** The invention is for reduction of defects, preferably the number of pattern collapse defects, during the manufacture of semiconductor devices. It is for avoiding a collapse of a developed pattern on a surface of substrates. (all claimed)
 - **ADVANTAGE:** The invention reduces defects in semiconductor devices incurred during the manufacturing process, without sacrificing throughput. It improves the process yield.